

REMARKS

Amendments to the specification have been made and are submitted herewith in the attached Substitute Specification. A clean copy of the specification and a marked-up version showing the changes made are attached herewith. All amendments have been made to place the application in proper U.S. format and to conform with proper grammatical and idiomatic English. None of the amendments herein are made for reasons related to patentability. No new matter has been added.

Claims 1, 4/1, 5/4/1, 5/1 and 6/1 have been rejected under 35 USC 103(a) as unpatentable over Applicants Prior Art ("APA") further in view of Epars (U.S. Patent No. 4,700,096), Amemiya (U.S. Patent No. 4,697,114) and Weh (U.S. Patent No. 4,663,551). The rejection is respectfully traversed.

The Examiner cites APA as disclosing "a permanent magnet rotor having permanent magnets that are flat in the magnetization direction and are arranged radially with respect to the rotor axis in slot like spaces between two yokes that are fixed to the rotor body." The Examiner also states that "APA does not state that the yokes are subdivided in a circumferential direction and extend over half of one pole pitch and arranged alongside one another and connected at end points to form pole elements with the pole elements fixed to the rotor body." The Examiner therefore cites Epars, Amemiya and Weh as disclosing same. Applicant's respectfully disagree with the Examiner.

None of the applied references, either alone or in combination, teach or suggest each yoke is subdivided in a circumferential direction into two mutually adjacent half-yokes which extend over half of one pole pitch, and the two half-yokes of the two yokes are arranged alongside one another and are connected by end points to form a pole element, the pole element

fixed on the rotor body. Rather, for example, Epars discloses a flange on the face of the rotor body in each instance (see, for example, column 3, lines 36-42). In this regard, each of the pole bodies of the rotor are connected with one another in the circumference direction. Indeed, the Examiner states that “Epars does not show the yokes to be connected to one another by end points.”

The Examiner then cites Amemiya and Weh as disclosing “a permanent magnet rotor in which the magnets are of cube shape” (Amemiya) and have “end points (76) that form as pole elements and act as wedges in connecting the yokes (75), and securing the permanent magnets (74)” (Weh). Nevertheless, neither of these references teach or suggest each yoke is subdivided in a circumferential direction into two mutually adjacent half-yokes which extend over half of one pole pitch, and the two half-yokes of the two yokes are arranged alongside one another and are connected by end points to form a pole element, the pole element fixed on the rotor body.

Additionally, the Examiner suggests that it would have been an obvious design choice to combine each of the four references. However, the Examiner appears to be using impermissible hindsight to arrive at Applicant’s claimed invention. The Examiner, as he/she appears to be doing, may not arbitrarily pick and choose references to arrive at the claimed invention. Nor may the Examiner combine the references without a reason why one having ordinary skill in the art would have been motivated to do so. For example, the Examiner states that it would have been obvious to combine the references “for the purpose of designing a rotor that is of a simpler form and less expensive in order to rotate at a high speed of about 15,000 rpm and to secure the permanent magnets (74).” This is merely a restatement of what Applicant’s invention is seeking to accomplish, without citing any reference in support why one having ordinary skill in the art would have been motivated to combine the inventions to arrive at this result.

Since the recited method is not disclosed by the applied prior art, claim 1 is patentable. Claims 2-5 and 7, depending either directly or indirectly from claim 1, are similarly patentable.

The rejection to claim 6 as vague and indefinite is moot in view of the amendment to same. Claim 6 is patentable for the same reasons set forth with respect to claim 1.

Claims 2/1 and 3/2/1 have been rejected under 35 USC 103(a) as unpatentable over APA and further in view of Epars, Amemiya and Burgmeier (U.S. Patent No. 4,926,544). The rejection is respectfully traversed for at least the same reasons presented above with respect to claim 1. Additionally, Burgmeier fails to disclose each yoke is subdivided in a circumferential direction into two mutually adjacent half-yokes which extend over half of one pole pitch, and the two half-yokes of the two yokes are arranged alongside one another and are connected by end points to form a pole element, the pole element fixed on the rotor body, as required by the claimed invention. Claims 2 and 3 are therefore patentable.

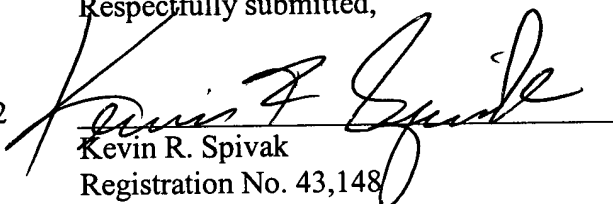
In view of the foregoing, claims 1-7 are in condition for allowance. An indication of the same is solicited.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "**Version with markings to show changes made**".

In the unlikely event that the transmittal letter is separated from this document and the Patent Office determines that an extension and/or other relief is required, applicant petitions for any required relief including extensions of time and authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 03-1952** referencing docket no. 449122010600. However, the Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

For the convenience of the Examiner, the changes made are shown below with deleted text in strikethrough and added text in underline.

In the Specification:

Please replace the current Title with the following rewritten Title:

**MULTIPOLE, PERMANENT-MAGNET ROTOR FOR A ROTATING ELECTRICAL
MACHINE, AND A METHOD FOR PRODUCING SUCH A ROTOR SAME**

In the Claims:

~~Patent Claims~~ **What is claimed is:**

1. (Amended) A multipole, permanent-magnet rotor for a rotating electrical machine, ~~in~~ **which comprising:**

permanent magnets ~~which are cuboid in order~~ to produce salient magnet poles and ~~are~~ designed to be flat in ~~the~~ a magnetization direction are arranged radially with respect to ~~the~~ a rotor axis in slot-like spaces between each two yokes that are fixed on ~~the~~ a rotor body, **wherein** characterized

~~in that~~ each yoke is subdivided in ~~the~~ a circumferential direction into two **mutually adjacent** half-yokes (2,3) which each extend over half of one pole pitch, and

~~in that~~ the two ~~mutually adjacent~~ half-yokes (3,2) of ~~the~~ two yokes **are** arranged alongside one another **and** are ~~in each case~~ connected by ~~means of~~ end points (6) to form a pole element(7), ~~and each,~~ **the** pole element (7) is fixed ~~on its own~~ on the rotor body(1).

2. (Amended) The ~~permanent magnet~~ rotor as claimed in patent claim 1, **wherein** ~~characterized in that~~

each of the two half-yokes is fitted with permanent magnets (5) on ~~its~~ a surface facing a slot-like intermediate space(4).

3. (Amended) The permanent-magnet rotor as claimed in ~~patent~~ claim 2, wherein ~~characterized in that the intermediate spaces (4)~~ space which ~~remain~~ remains between the two half-yokes (2, 3) of a the pole element (7) are elements is filled with material (9) which ~~can~~ is configured to expand under the influence of impregnation resin.

4. (Amended) The permanent ~~magnet~~ rotor as claimed in claim 3, wherein ~~one of claims 1 to 3, characterized in that the permanent magnets (5) are secured radially by means of double wedges (8).~~ double wedges.

5. (Amended) The permanent-magnet rotor as claimed in ~~one of claims 1 to 4,~~ claim 1, wherein the pole element is characterized in that the individual pole elements (7) are subdivided into a number of partial pole elements (73) in the an axial direction of the rotor.

6. (Amended) A method for producing a permanent-magnet rotor as claimed in ~~patent~~ claim 1, in which non-magnetized magnets are magnetized, comprising:

magnetizing non-magnetical magnets before being arranged on the rotor body, a rotor body; and

characterized arranging radially permanent magnets to produce salient magnet poles which are configured to be flat in a magnetization direction with respect to a rotor axis in slot-like spaces between two yokes fixed on the rotor body, wherein

in that the magnets (5) are magnetized once the two half-yokes have been joined together each yoke is subdivided in a circumferential direction into two mutually adjacent half-yokes which extend over half of one pole pitch,

the two half-yokes of the two yokes are arranged alongside one another and are connected by end points to form a pole element(7), the pole element fixed on the rotor body, and the magnets are magnetized once the two half-yokes have been joined together to form a pole element.

Please add new claim 7 as before-mentioned.

In the Abstract:

Please replace the current Abstract with the substitute Abstract attached hereto.